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EXAMINER

MUSSER, BARBARA J

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,397

Applicant(s)

POULAKIS, KONSTANTINOS

Examiner

Barbara J. Musser

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-26 and 28-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-26, 28-37 and 43-45 is/are rejected.
- 7) ☒ Claim(s) 38-42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Schulte reference. Applicant has not shown possession of the whole invention as claimed since the evidence does not show the slip preventer being of a softer material than the strip, and actually indicates that the softnesses of the materials are not important. Applicant must establish possession of either the whole invention claimed or something falling within the claim in the sense that the claim as a whole reads on it.(MPEP 715.02)

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 38, it is unclear what is meant by the shaped strip has a dimension to be retained in the cushion. For the purposes of examination, this is considered to mean that the strip is of a size or shape that it remains in the cushion.

Regarding claim 42, it is unclear what is meant by the cushion having an undercut to cooperate with the strip. For the purposes of examination, this is

considered to mean that cut-out portion of the cushion the strip is located in is wider than the cut-out portion it is inserted through as shown in Figure 1 such that the strip interlocks with the cushion.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11, 15, 17, and 28 are rejected under 35 U.S.C. 103(a) as being obvious over Esler(U.S. Patent 3,876,495).

Esler discloses a flexible cord for seats which has a core formed from polymer fibers which is covered in an extruded foam coating which reduces the slippage of the cord.(Col. 2, ll. 2-17; Col. 3, ll. 48-50; Col. 6, ll. 57) The material is capable of securing a cover to a cushion. The coating increases tear resistance since it decreases the slippage. It is noted that the claim does not require the insertion of the cord into the cushion, but rather only that it is capable of doing so. Since the cord is thin enough and flexible enough to be inserted into a cushion, it is capable of being inserted. While the reference does not disclose the hardnesses of the core or foam coating, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the foam coating softer than the core since the foam coating, which is intended to be velvety and flexible(Col. 3, ll. 41) would be softer than a material which is intended to

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be reinforcing(Col. 2, ll. 23) particularly since reinforcing implies that the core is stronger than the foam by itself. It is noted there is nothing in the claim positively requiring the softness of the plastic material to refer to the composition of the plastic material rather than its structural properties.

Regarding claims 17 and 28, extrusion is considered a hot coating method.(Col. 5, ll. 57)

6. Claims 11, 12, 15, 17, 22-24, 28, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulte(ZA 9805087A) in view of Esler, and Maruyama. U.S Patent 6,478,382 is considered an English language translation of ZA 9805087A and all column and line numbers refer thereto.

Schulte discloses a flexible shaped strip which serves to secure a cover to a foamed seat cushion having a longitudinal slit into which the strip is applied.(Figures 1 and 2; Abstract; Col. 1, ll. 6-13; Col. 4, ll. 3) The part of the strip containing the slit into which the cover is inserted is provided with an anti-slip means.(Col. 3, ll. 52-57) The reference does not disclose what these anti-slip means are. Esler discloses coating a strip used in seats with a foam material to prevent slippage of the strip relative to the material surrounding it.(Col. 2, ll. 2-17; Col. 3, ll. 48-50) This material is soft and flexible. Maruyama et al. discloses applying a rubber layer to the outside of a wire which is in a strip which secures a cover to a foamed seat cushion though the reference is silent with regards to the hardness.(Col. 2, ll. 4-11; Col. 3, ll. 27-30) Rubber is an anti-slip material and applicant's claim 22 indicates it is considered a plastic material. It would have been obvious to one of ordinary skill in the art at the time the invention was

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made to coat the shaped strip of Schulte with a material which is anti-slip as shown in Esler since Schulte discloses using anti-slip means but is silent as to the exact nature of those means, since Esler discloses coating a plastic core with a soft, flexible plastic material to prevent slippage of the strip when used in a seat cushion, and since Maruyama et al. discloses it is known to coat strips that perform the same function, namely holding seat covers in seat cushions, with rubber which is an anti-slip material. While the reference does not disclose the hardnesses of the core or anti-slip coating, Esler shows the anti-slip coating is intended to be velvety and flexible (Esler, Col. 3, ll. 41) while the strip is intended to be reinforcing (Esler, Col. 2, ll. 23), clearly suggesting the anti-slip coating is softer than the core. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the anti-slip coating a material which was softer than the core since Esler suggests the coating is softer than the core, and since this would place a softer material closer to the person sitting in the chair while retaining the strength (hardness) necessary to prevent the strip from breaking by forming the core of a harder material. While the references do not state the anti-slip means increases tear resistance of the strip, Schulte does disclose the anti-slip means improve anchoring of the strip in the channel. (Col. 3, ll. 54-55) Since applicant's claim indicates improved tear resistance results in the ability of the strip to resist removal from the cushion and improved anchoring of the strip in the channel as described by Schulte also means it resists removal from the cushion, Schulte is considered to teach increasing the tear resistance of the strip.

Regarding claim 9, the profile of the shaped strip is round. (Figure 1)

Regarding claims 12 and 32, while the references do not disclose the specific hardness of the material, a hardness of 150 is very hard, and one in the art would appreciate that since the foam of Esler was intended to be flexible(Col. 3, ll. 3), it would have a hardness of less than 150.

Regarding claims 17 and 28, Esler discloses extruding the coating, and extrusion is considered a hot coating method.(Col. 4, ll. 25-26; Col. 6, ll. 57; Figure 4)

Regarding claim 22, while Schulte is silent as to the specific material of the anti-slip means, Esler discloses the foam can be made from polyurethane.(Col. 4, ll. 11) Since polyurethane foam was created to replace natural rubber, one in the art would appreciate that it is a rubber-type plastic. Additionally Maruymama shows the use of rubber as an anti-slip coating.

Regarding claims 23 and 31, Schulte discloses the anti-slip means are located in the recesses(30, 32). Since it does not disclose applying the anti-slip means to the raised areas between the recesses, one in the art would appreciate that it was applied only to the recesses.(Col. 3, ll. 52-60)

Regarding claim 30, Schulte discloses the strip has a top surface with a longitudinal slot and longitudinal interlocking members on the side surfaces of the strip(14) with recesses(30,32) therebetween. While the reference does not expressly disclose fastening means to holding the fabric in the slot, one in the art would appreciate that some sort of fastening means would be present since the purposes of the strip is for the fabric to be inserted into the slot in the strip and not be removed.

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7. Claims 12-14, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 11 above, and further in view of Tolle(U.S Patent 4,057,956).

The references cited above do not disclose the hardness of the anti-slip material. Tolle discloses forming an anti-slip layer on a cable wherein the coating has a hardness of 60-70 so that it will be flexible but hard enough to prevent tearing and wear of the coating during use.(Col. 2, ll. 60-61; Col. 3, ll. 55-61) It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the anti-slip layer have a hardness of about 60-70 since this would make it flexible but hard enough to prevent tearing and wear of the coating during use.(Col. 2, ll. 60-61; Col. 3, ll. 55-61)

8. Claims 18, 19, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 11 above, and further in view of Engelson(U.S. Patent 5,095,915).

The references cited above do not disclose how the coating is applied to the strip. Engelson discloses that coatings can be conventionally applied to thin strips by extrusion or dip coating.(Col. 4, ll. 31-37) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional coating method to apply the anti-slip material to the shaped strips such as extrusion or dip coating since they are conventional methods of applying coatings to thin strips(Col. 4, ll. 31-37).

Regarding claims 25 and 26, while the references do not indicate applying the anti-slip material as flakes or clots, one in the art would appreciate that any conventional coating method could be used to apply the material.

9. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulte, Esler, and Maruyama et al. as applied to claim 11 above, and further in view of Boon et al.(U.S. Patent 4,874,670).

The references cited above do not disclose the coating being an ultraviolet or electron curable material which is cured. One in the art would appreciate that any type of material that would form a relatively soft anti-slip coating could be used. Such materials include rubbers, which should be cured to be usable. Since thermal curing would melt the plastic the rubber is coated on, one in the art would appreciate that a different type of cure such as ultraviolet, which is well-known in the curing arts, would be used in place of a thermal cure for rubber coatings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use ultraviolet radiation to cure the coating on the shaped strip since this would allow curing of the coating without exposing the strip to high temperatures that would degrade the polymer used as the base for the strip and since ultraviolet and electron beam curing are well-known and conventional in general in the bonding arts as curing methods as shown for example by Boon et al. which discloses using ultraviolet and electron beam curable rubbers as coatings.(Col. 2, ll. 3-6, 59-61)

10. Claims 11, 29, 34-38, and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulte(ZA 9805087A) in view of Esler, and the admitted prior art.

U.S Patent 6,478,382 is considered an English language translation of ZA 9805087A and all column and line numbers refer thereto.

Schulte discloses a flexible shaped strip which serves to secure a cover to a foamed seat cushion having a longitudinal slit into which the strip is applied.(Figures 1 and 2; Abstract; Col. 1, ll. 6-13; Col. 4, ll. 3) Schulte discloses the strip has a top surface with a longitudinal slot and longitudinal interlocking members on the side surfaces of the strip(14) with recesses(30,32) therebetween. While the reference does not expressly disclose fastening means to holding the fabric in the slot, one in the art would appreciate that some sort of fastening means would be present since the purposes of the strip is for the fabric to be inserted into the slot in the strip and not be removed.The part of the strip containing the slit into which the cover is inserted is provided with an anti-slip means.(Col. 3, ll. 52-57) The reference does not disclose what these anti-slip means are. Esler discloses coating a strip used in seats with a foam material to prevent slippage of the strip relative to the material surrounding it.(Col. 2, ll. 2-17; Col. 3, ll. 48-50) The admitted prior art discloses it is known to configure strips from anti-slip components.(Pg. 2, ll. 2-3) Since the purpose of this is to prevent the slippage of the strip relative to the foam ,this is considered to teach that the anti-slip components directly contact the foam. It would have been obvious to one of ordinary skill in the art at the time the invention was made to coat the shaped strip of Schulte with a material which is anti-slip as shown in Esler since Esler discloses coating a plastic core with a plastic material to prevent slippage of the strip when used in a seat cushion, and since the admitted prior art discloses it is known to make the strips from

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anti-slip components which directly contact the foam. While the reference does not disclose the hardnesses of the core or anti-slip coating, Esler shows the anti-slip coating is intended to be velvety and flexible(Esler, Col. 3, ll. 41) while the strip is intended to be reinforcing(Esler, Col. 2, ll. 23), clearly suggesting the anti-slip coating is softer than the core. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the anti-slip coating a material which was softer than the core since Esler suggests the coating is softer than the core, and since this would place a softer material in contact with the person sitting in the chair while retaining the strength(hardness) necessary to prevent the strip from breaking by forming the core of a harder material. While the references do not state the anti-slip means increases tear resistance of the strip, Schulte does disclose the anti-slip means improve anchoring of the strip in the channel.(Col. 3, ll. 54-55) Since applicant's claim indicates improved tear resistance results in the ability of the strip to resist removal from the cushion and improved anchoring of the strip in the channel as described by Schulte also means it resists removal from the cushion, Schulte is considered to teach increasing the tear resistance of the strip.

Regarding claim 35, Esler discloses extruding the coating, and extrusion is considered a hot coating method.(Col. 4, ll. 25-26; Col. 6, ll. 57; Figure 4)

Regarding claim 37, Schulte discloses the anti-slip means are located in the recesses(30, 32). Since it does not disclose applying the anti-slip means to the raised areas between the recesses, one in the art would appreciate that it was applied only to the recesses.(Col. 3, ll. 52-60)

Regarding claim 34, Schulte discloses a longitudinal channel in a seat cushion into which the strip is inserted.(Col. 3, ll. 12-15)

Regarding claims 36 and 44, the anti-slip means is applied to the top surface(28) of the shaped strip.(Col. 3, ll. 53-57)

Regarding claims 38 and 43, while the references do not disclose the thickness of the slip preventer relative to the strip, one in the art would appreciate that since the purpose of the slip preventer is to interact with the cushion to prevent slippage, it would not need to be very thick, and would therefore make the slip preventer layer thin since a thick layer would not be required and since it is easier to apply a thin layer of material to a substrate than a thick layer since a thin layer hardens/dries faster.

Regarding claim 45, Schulte discloses a fastener(35) which is coupled to the shaped strip.(Col. 3, ll. 38-44)

Response to Arguments

11. Applicant's arguments filed 1/4/06 have been fully considered but they are not persuasive.

Regarding applicant's argument that Esler is not a flexible shaped strip that functions as a fastener for securing a covering to a cushion, claim 11 does not require such. It only requires that the strip be capable of doing such. The strip is not actually inserted into the cushion in the claims where Esler is the only reference.

Regarding applicant's argument that Esler does not disclose a plastic that is softer than the plastic material of the core, the claim does not positively require the

softness of the plastic material to refer to the composition of the plastic material rather than its structural properties. Clearly the foam layer is softer than the fibrous inner layer.

Regarding applicant's argument that Schulte does not disclose an anti-slip material on the outside of the strip, Schulte clearly indicates the recesses are provided with anti-slip means. This indicates that something is applied to them as the providing of anti-slip means is listed as an alternative to the inherent configuration providing anti-slip characteristics.(Col. 3, ll. 52-55)

Regarding applicant's argument that the foam of Esler does not provide anti-slip between the cord and the seat cushion, examiner agrees. The foam provides an anti-slip function between the cord and the fabric covering it. It is clearly pertinent since it shows how others also manufacturing the same product dealt with the same type of problem.

Regarding applicant's argument that the purpose of the foam of Esler is to provide bulk and not anti-slip characteristics, the reference clearly indicates the foam provides anti-slip characteristics.(Col. 2, ll. 14-17)

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

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Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Esler discloses coating a strip with another layer which prevents slippage of the strip relative to the material surrounding it.

Regarding applicant's argument that Maruyama does not disclose a wire that directly contacts the foam cushion, Schulte discloses the strip with anti-slip means directly contacts the cushion.(Col. 2, ll. 55- Col. 3, ll. 9). Examiner did not indicate that the rubber covered wire of Maruyama directly contacted the seat cushion. Rather the rubber acts as an anti-slip material between the wire and the cover. Examiner is not suggesting directly using the wire of Maruyama in the method of Schulte, but rather that it would also suggest to one in the art to cover the cord which holds the seat cover in the cushion with rubber since Maruyama is directed to a similar wire present in seat cushion

Regarding applicant's argument that the wire of Maruyama is not directly engaged with the foam, the claims in which Maruyama is used do not require the wire to directly contact the foam cushion.

Regarding applicant's argument that the shaped strip does not contact the person sitting in the chair, applicant's own specification indicates that hard materials used in the strip lead to reduction in seat comfort, clearly indicating that a hard material in the cushion would cause discomfort to the seated person, therefore clearly contacting them in some way, whether directly or indirectly.

In response to applicant's argument that Tolle is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if

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not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention.

See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the reference is reasonably pertinent to applicant's problem, namely the slippage between components. *Tolle* is reasonably pertinent to applicant's problem, the prevention of slip between two materials since it is directed to preventing slippage between two articles.

12. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that the anti-slip layer directly contacts the foam) are not recited in the rejected claims 11-28 and 30-32. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Although applicant indicates this is the invention, the rejection is not based on applicant's general description of the invention, but rather what applicant has claimed, as otherwise, the scope of the protected invention would not be clear.

Allowable Subject Matter

13. Claims 39-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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14. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or fairly suggest the shaped strip having a concave recessed top surface.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BJM



SAM CHUAN YAO
PRIMARY EXAMINER